



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**D2580-1**

**Job Sheet 179617**



Part No: D2580-1

Job Qty: 8 ea

Part Name: 205 Bent Tube



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/20/18

Job Tracking No:

Due Date: 7/20/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG D2580 REV h SHEETS 1,2,3,8 IPP B 01.11.08 Revised Step 9, 10, 12, and 13 SM IPP Rev:C 10.12.01  
as per DEO D1 DD verf:ec

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off       |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|----------------|
|       |                    |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |                |
| 90    | Start up Operation | 8 Ea  | 7/20/18    | 7/20/18  | 0.00      | 0.00    | Start Up Skid tubes   |           | DD             |
| 100   | Skid tubes         | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 7.41    | Skid tubes            |           | DD             |
| 101   | QC                 | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 0.00    | QC5                   |           | DE             |
| 110   | HandFinish         | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 3.33    | HandFinish1           |           | DE             |
| 120   | QC                 | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 0.00    | QC7                   |           | DE             |
| 125   | Skid tubes         | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 7.41    | Skid tubes            |           | JUL            |
| 130   | QC                 | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 0.00    | QC5                   |           | JUL            |
| 140   | Packaging          | 8 pcs | 7/20/18    | 7/20/18  | 0.00      | 0.00    | Packaging3            |           | JUL            |
| 150   | QC21-SA            | 8 Ea  | 7/20/18    | 7/20/18  | 0.00      | 0.00    | QC21                  |           | 21 JUN 29 2018 |

Part Op 100 - 1- Inspect mat'l D2500-1-190 for damage. 2-Drill pilot holes using drill jig DT 8149 A-BC-D 3-Open holes to 0.508"  
Descriptions: as per Dwg D2580 4-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube 5- Test fit  
inspection saddles on FWD & AFT saddle holes using DT9916.

125 - 1- Bond web in place per QSI 015. A/R Sikaflex-291 batch: 422013 Sikaflex expire date: March 2019 Start  
time and date: \_\_\_\_\_ bond for 12hrs

140 - LOCATION : LG002

### Job BOM

| Part / Item | Component Name         | Quantity    | Operation             | Container                           |
|-------------|------------------------|-------------|-----------------------|-------------------------------------|
| D2500-1-190 | Ext'n -I' Beam Tube 4" | 8 Ea (1 ea) | 90-Start up Operation | 5081201                             |
| D2596       | Web, 205 Skidtube      | 8 Ea (1 ea) | 125-Skid tubes        | 4x5070483<br>3x5072316<br>1x5075521 |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | D2500-1-190    | 8        | 47        | 0         |
| 125-Skid tubes        | D2596          | 8        | 17        | 0         |

### Part Specifications

Specifications could not be found.



Work Order update only

H:/FORMS/Quality Assurance/approved QA/NCRWO Rev I

| ITEM | QTY<br>-041 | QTY<br>-045 | QTY<br>-047 | QTY<br>-049 | PART NUMBER                                                               | DESCRIPTION         |
|------|-------------|-------------|-------------|-------------|---------------------------------------------------------------------------|---------------------|
| 1    | X           |             |             |             | D2580-041                                                                 | SKIDTUBE ASSEMBLY   |
| 2    |             | X           |             |             | D2580-045                                                                 | SKIDTUBE ASSEMBLY   |
| 3    |             |             | X           |             | D2580-047                                                                 | SKIDTUBE ASSEMBLY   |
| 4    |             |             |             | X           | D2580-049                                                                 | SKIDTUBE ASSEMBLY   |
| 20   | 1           | 1           | 1           | 1           | D2500-1-190                                                               | EXTRUSION           |
| 21   |             |             | 16          | 16          | D2570                                                                     | BUSHING             |
| 22   | 1           | 1           | 1           | 1           | D2576-3                                                                   | STEP                |
| 23   |             | 4           |             |             | D2579                                                                     | SPACER              |
| 24   | 16          | 16          | 8           | 8           | D2594-1                                                                   | PLUG                |
| 25   | 16          | 16          | 8           | 8           | D2594-3                                                                   | O-RING              |
| 26   | 1           | 1           | 1           | 1           | D2596                                                                     | 205 WEB             |
| 27   | 1           | 1           | 1           | 1           | D2855                                                                     | AFT CAP             |
| 28   | 1           | 1           |             |             | D3564-5                                                                   | WEARSHOE            |
| 29   | 1           | 1           |             |             | D3564-9                                                                   | WEARSHOE            |
| 30   | 1           | 1           |             |             | D3564-11                                                                  | WEARSHOE            |
| 31   | 1           | 1           |             |             | D3564-13                                                                  | WEARSHOE            |
| 32   | 20          | 20          | 24          | 24          | D4202-1                                                                   | SPACER              |
| 33   |             |             | 1           |             | D4406-041                                                                 | WEARPLATE ASSEMBLY  |
| 34   |             |             | 1           |             | D4406-043                                                                 | WEARPLATE ASSEMBLY  |
| 35   |             |             |             | 1           | D5061-1                                                                   | FWD WEARPLATE       |
| 36   |             |             |             | 1           | D5061-3                                                                   | AFT WEARPLATE       |
| 50   | 50          | 50          |             |             | ALS7-1032-130<br>or AKS7-1032-130<br>or AKS4-1032-130<br>or AELS-1032-130 | INSERT              |
| 51   | 50          | 50          |             |             | AN3C4A                                                                    | BOLT                |
| 52   | 2           | 2           | 2           | 2           | AN3-5A                                                                    | BOLT                |
| 53   |             |             | 8           | 8           | AN4-45A                                                                   | BOLT                |
| 54   | 50          | 50          |             |             | NAS1149C0332R                                                             | WASHER (AN960C10L)  |
| 55   | 2           | 2           | 2           | 2           | NAS1149D0332J                                                             | WASHER (AN960JD10L) |
| 56   |             |             | 8           | 8           | MS21042-4                                                                 | NUT (OR MS21042L4)  |

#### GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT (-041/-047/-049) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3  
POWDER COAT (-045) GREEN SANDETEX (REF 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 33.7 lbs  
D2580-045 = 33.7 lbs  
D2580-047 = 45.1 lbs  
D2580-049 = 32.0 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047/-049)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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18-06-20

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|            |                                                                                                                                                           |     |          |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| H          | SHEET: PL DELETE D3566-1/-5/-13 GASKETS, WEIGHTS UPDATED ACCORDINGLY. SHEETS 2 & 4 PICTORIAL UPDATE FOR REMOVAL OF GASKETS                                | SAD | 17.06.09 |
| G          | ADDED -049, -047 WEIGHT UPDATED PER DSI 9596                                                                                                              | AJS | 14.04.09 |
| F          | INCORPORATE DEO D2580-E-1 PER PAR12-218                                                                                                                   | DC  | 13.06.20 |
| E          | ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1) | RF  | 11.06.21 |
| D          | CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 8124/ 8183                                                                                               | PH  | 07.04.05 |
| C          | REDRAWN, INCLUDED DEO 9094/ 9097                                                                                                                          | CP  | 98.08.26 |
| B          | AS MANUFACTURED                                                                                                                                           | DS  | 96.12.02 |
| A          | NEW ISSUE                                                                                                                                                 | DS  | 96.09.16 |
| REV.       | DESCRIPTION                                                                                                                                               | BY  | DATE     |
| DESIGN     | DS                                                                                                                                                        |     |          |
| DRAWN      | SAD                                                                                                                                                       |     |          |
| CHECKED    | <i>[Signature]</i>                                                                                                                                        |     |          |
| MFG. APPR. | <i>[Signature]</i>                                                                                                                                        |     |          |
| APPROVED   | <i>[Signature]</i>                                                                                                                                        |     |          |
| DE APPR.   | <i>[Signature]</i>                                                                                                                                        |     |          |
| DATE       | 17.06.09                                                                                                                                                  |     |          |

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D2580  
TITLE 205 SKIDTUBE ASSEMBLY  
REV. H  
SHEET 1 OF 9  
SCALE NTS

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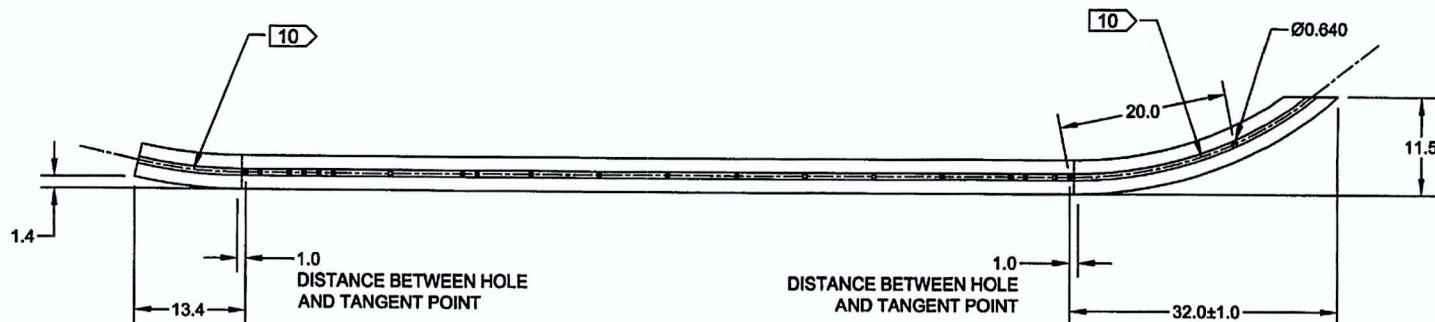


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HAWKESBURY, ONTARIO, CANADA

|                      |                        |
|----------------------|------------------------|
| DRAWING NO.<br>D2580 | REV. H<br>SHEET 2 OF 9 |
|----------------------|------------------------|

|                       |       |
|-----------------------|-------|
| TITLE                 | SCALE |
| 205 SKIDTUBE ASSEMBLY | NTS   |

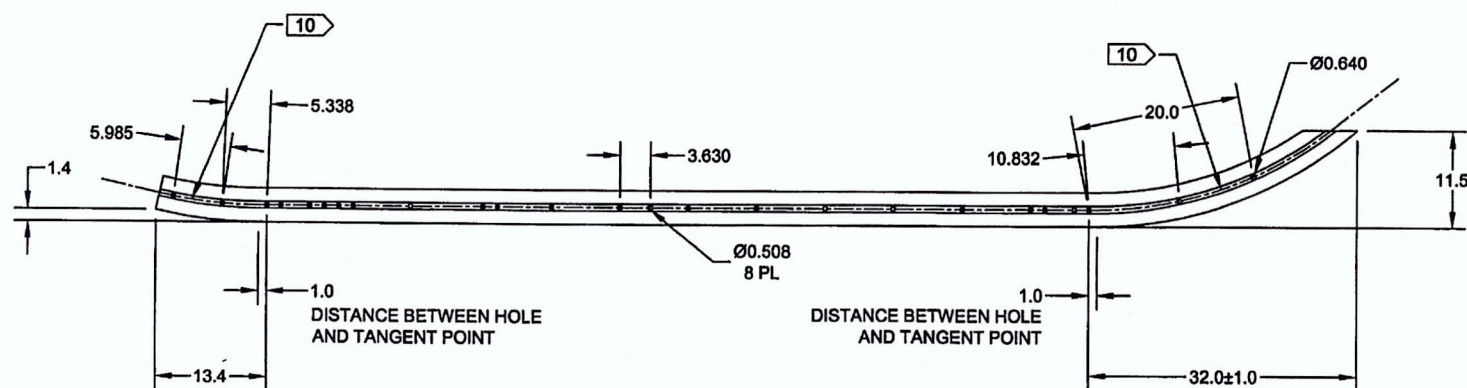
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**D2580-1 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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| MFG. APPR. | <i>[Signature]</i> | TITLE<br>205 SKIDTUBE ASSEMBLY                                                                                                                                                                                                                                           | SCALE<br>NTS           |
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**D2580-7 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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| MFG. APPR. | <i>[Signature]</i> | TITLE<br>205 SKIDTUBE ASSEMBLY                                                                                                                                                                                                                                           | SCALE<br>NTS           |
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